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EXAMINER

LEUNG, JENNIFER A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/511,158

Applicant(s)

NAKAMOTO ET AL.

Examiner

Jennifer A. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005 and 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 8, 2005 has been entered.

Response to Amendment

2. Applicant's response submitted on July 8, 2005 and applicant's supplemental response submitted on October 5, 2005 have been received and carefully considered. Claims 3-6 and 8-11 are cancelled. Claims 12-15 are newly added. Claims 1, 2, 7 and 12-15 remain active.

Claim Objections

3. Claims 1 and 12 are objected to because of the following informalities:

In claim 1, line 10: --the-- should be inserted before "position".

In claim 12, line 11: "form" should be changed to --from--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12, “the other end of the vessel” (line 6) lacks proper positive antecedent basis (e.g., --the another end of the vessel--). Also, it is unclear as to the relationship between the “treated liquid” (lines 5, 6) and the “raw materials of an aromatic dicarboxylic acid or its derivative and glycols” set forth in the preamble. Also, it is unclear as to the relationship between the “polymerized matter” in line 8 and the “treated liquid” set forth in lines 5 and 6 or the “high molecular weight polyester” set forth in the preamble.

Regarding claim 13, it is unclear as to the relationship between “a low viscosity side of the reactor” (lines 2-3) and the “one end and another end” set forth in claim 12, lines 4-5. Likewise, it is unclear as to the relationship between “a high viscosity side of the reactor” (lines 3-4) and the “one end and another end” set forth in claim 12, lines 4-5.

Regarding claim 14, it is unclear as to the relationship between “a low viscosity side [of...]” (lines 2-3) and the other elements of the apparatus. Likewise, the structural relationship between “a high viscosity side [of...]” (line 3) and the other elements of the apparatus.

Regarding claim 15, it is unclear as to the relationship between “a low viscosity side [of...]” (lines 2-3) and the other elements of the apparatus. Likewise, the relationship between “a high viscosity side [of...]” (line 3) and the other elements of the apparatus.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ryder et al. (US 2,869,838).

Regarding claim 12, Ryder et al. (FIG. 1-3) discloses an apparatus comprising: a reactor comprising a substantially horizontal cylindrical vessel 2, an inlet 3 provided at the one end of the vessel 2, an outlet 4 provided at the other end of the vessel 2, and a stirring rotor (i.e., agitator 9) provided in the vessel 2, having no shaft at a rotating center (i.e., as formed by a “cagelike construction”). According to page 21, line 16, to page 22, line 11, of Applicant’s specification, it appears that a “stirring block” comprises a group of disks or vanes of a particular zone in the reactor. Thus, the stirring rotor 9 of Ryder et al. comprises a plurality of stirring blocks provided with stirring vanes (i.e., a plurality of zones within the reactor, arbitrarily selected, from inlet 3 to outlet 4, containing screens 11 to 29; as an example, a first block including screen numbers 1-11 of mesh 3, a second block including screen numbers 12-15 of mesh size 2, and a third block including screen numbers 16-19 of mesh size 1, see column 4, Table); said stirring blocks having the stirring vanes being different in structure from one another (i.e., structured with different mesh sizes; column 3, lines 54-57).

Regarding claim 13, stirring vanes (i.e., screens 11 to 29; FIG. 1) on a low viscosity side of the reactor (i.e., facing inlet 3) and stirring vanes on a high viscosity side of the reactor (i.e., facing outlet 4) each have at least one scraping plate in the periphery (i.e., as defined by four evenly spaced compression rods 31; column 2, lines 28-34), and the number of stirring vanes 11 to 29 on the high viscosity side (i.e., the outlet 4 side) is smaller than the number of stirring vanes on the low viscosity side (i.e., the inlet 3 side). (see FIG. 1, 3; column 3, lines 44-57).

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Regarding claim 14, stirring vanes (i.e., screens 11 to 29; FIG. 1) on a low viscosity side (i.e., facing inlet 3) and stirring vanes on a high viscosity side (i.e., facing outlet 4) each have at least one hollow portion (i.e., as defined by the openings in the screens), and the area of the hollow portions on the high viscosity side is larger than the area of the hollow portions on the low viscosity side (i.e., "... the size of the openings in the screens should approximate the screen spacing, being on the order of inches at high viscosities and fractions of an inch at low viscosities," column 3, lines 54-57. See also FIG. 3 and column 4, Table).

Regarding claim 15, see comments made in claim 13.

Instant claims 12-15 structurally read on the apparatus of Ryder.

6. Claims 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Takiguchi et al. (US 3,630,688).

Regarding claim 12, Takiguchi et al. (FIG. 1-5) discloses an apparatus comprising: a reactor comprising a substantially horizontal cylindrical vessel 1, an inlet 3 provided at the one end of the vessel, an outlet 4 provided at the other end of the vessel, and a stirring rotor (i.e., an agitator 8, not labeled in the Figures) provided in the vessel; said stirring rotor 8 having no shaft at a rotating center (i.e., as formed by a rotor having a plurality of rods 13 extending in parallel with the central axis; see FIG. 1-3). According to page 21, line 16, to page 22, line 11, of Applicant's specification, it appears that a "stirring block" comprises a group of disks or vanes of a particular zone in the reactor. Thus, the stirring rotor 8 of Takiguchi et al. comprises a plurality of stirring blocks (i.e., from inlet 3 to outlet 4, an inlet block/zone, an intermediate block/zone, and an outlet block or zone, each block/zone being arbitrarily selected and containing stirring vanes 14), said stirring blocks having the stirring vanes 14 being different in structure from one

another (i.e., for each vane 14, “[t]he wire gauze and the grid have gradually increased sizes of meshes as the viscosity of the liquid reactant is increased,” column 3, lines 28-43).

Regarding claim 13, stirring vanes 14 on a low viscosity side of the reactor (i.e., facing inlet 3) and the stirring vanes 14 on a high viscosity side of the reactor (i.e., facing outlet 4) each have at least one scraping plate in the periphery (i.e., as defined by rods 13; see FIG. 2, 3), and the number of stirring vanes 14 on the high viscosity side (i.e., outlet 4 side) is smaller than the number of stirring vanes 14 on the low viscosity side (i.e., inlet 3 side). (see FIG. 1; ref. claim 8).

Regarding claim 14, the stirring vanes 14 on a low viscosity side (i.e., facing inlet 3) and the stirring vanes 14 on a high viscosity side (i.e., facing outlet 4) each have at least one hollow portion (see FIG. 2, 3), and the area of the hollow portions on the high viscosity side (i.e., outlet 4 side) is larger than the area of the hollow portions on the low viscosity side (i.e., inlet 3 side). (i.e., for each vane 14, “[t]he wire gauze and the grid have gradually increased sizes of meshes as the viscosity of the liquid reactant is increased,” column 3, lines 28-43; ref. claims 7 and 9).

Regarding claim 15, see the comments made in claim 13 above.

Instant claims 12-15 structurally read on the apparatus of Takiguchi et al.

7. Claims 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by van Endert et al. (US 5,779,986). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claim 12, van Endert et al. (FIG. 1-7) discloses an apparatus comprising: a reactor comprising a substantially horizontal cylindrical vessel 1, an inlet 4 provided at the one end of the vessel 1, an outlet 5 provided at the other end of the vessel 1, and a stirring rotor 8

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having no shaft at a rotating center (see FIG. 1; the rotor 8 is formed from a hollow cylinder 9) provided in the vessel 1. According to page 21, line 16, to page 22, line 11, of Applicant's specification, it appears that a "stirring block" comprises a group of disks or vanes of a particular zone in the reactor. Thus, the stirring rotor 8 of van Endert et al. further comprises a plurality of stirring blocks provided with stirring vanes (i.e., "... the reactor is subdivided over its length into three different zones, the spaces between the annular perforated discs 12 or spoked wheels 13 from one another for example varying from zone to zone," column 4, lines 15-18; e.g., zones 29a, 29b and 29c are shown in FIG. 5); said stirring blocks (i.e., the zones) having stirring vanes 12, 13 being different in structure from one another (i.e., the vanes are structured to have different free cross-sections; see column 5, lines 15-31, which discloses that, "[t]he annular disks 12 are provided over their entire cross-section with a plurality of holes, and the spoked wheels have longitudinal and transverse spokes, the size of the holes, i.e., the free cross-section of the annular disks 12 increasing from the front backwards, or the number of spokes 13 also decreasing from zone to zone.").

Regarding claim 13, the stirring vanes 12, 13 on a low viscosity side of the reactor 1 (i.e., facing the inlet 4 side) and the stirring vanes 12, 13 on a high viscosity side of the reactor 1 (i.e., facing the outlet 5 side) each have at least one scraping plate in the periphery (i.e., elements 25, 15, 26, 27; FIG. 5), and the number of stirring vanes 12, 13 on the high viscosity side is smaller than the number of stirring vanes 12, 13 on the low viscosity side (i.e., "...the reactor is subdivided over its length into three different zone, the spaces between the annular perforated discs 12 or spoked wheels 13 from one another for example varying from zone to zone.... the spacings of the annular discs 12 in the inlet area are smaller than in the central area, and these in

turn are smaller than in the terminal area,” column 4, lines 15-21).

Regarding claim 14, the stirring vanes (i.e., perforated discs **12**, spoked wheels **13**) on a low viscosity side (i.e., facing inlet **4**) and the stirring vanes on a high viscosity side (i.e., facing outlet **5**) each have at least one hollow portion, and the area of the hollow portions on the high viscosity side is larger than the area of the hollow portions on the low viscosity side (i.e., “[t]he annular disks **12** are provided over their entire cross-section with a plurality of holes, and the spoked wheels have longitudinal and transverse spokes, the size of the holes, i.e., the free cross-section of the annular disks **12** increasing from the front backwards, or the number of spokes **13** also decreasing from zone to zone.” see column 5, lines 15-31).

Regarding claim 15, see comments in claim 13.

Instant claims 12-15 structurally read on the apparatus of van Endert et al.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothert et al. (US 3,761,059) in view of Hohlbaum (US 4,244,923).

Regarding claims 1, 2 and 7, Rothert et al. discloses a reactor comprising:

a) a substantially horizontal cylindrical vessel (i.e., cylindrical closed reaction vessel **20**) provided with an inlet at a lower part at one end thereof (i.e., inlet **22** for flowable material **23**), an outlet at the lower part at the other end thereof (i.e., outlet **24** for material **23** discharge), and an outlet at the upper part thereof (i.e., for vapor or gas connection **50**); (column 4, line 61 to column 5, line 18; FIG. 1); and

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b) a stirring rotor (i.e., agitating and propulsion apparatus **26**) provided with a plurality of hollow disks (i.e., annular discs **220** to **220s**) in the longitudinal direction thereof located within the cylindrical vessel **20**, the hollow disks **220** to **220s** being connected to each other by longitudinal stringers **116** that are welded to and pierce through the disks, each between adjacent hollow disks **220** to **220s** at their peripheries (column 5, lines 19-28; FIG. 1, 2);

wherein stirring rotor **26** is without any rotating shaft at the position of a rotating center axis (FIG. 1, 2; column 2, lines 14-48; column 3, lines 53-62; column 5, lines 19-28) and is provided with a support member at one end of the stirring rotor (i.e., stub shaft portion **110'** at inlet **22** end of the vessel; FIG., 1, 10) and another support member at the other end thereof (i.e., stub shaft portion **112'** at outlet **24** end of the vessel; FIG. 1, 10); the outer diameter of the another support member **112'** being smaller than the outer diameter of the stirring rotor **26** (see FIG. 1, 8, 10), and the another support member **112'** further comprising scraping vanes (i.e., vanes of screw-shaped stripper **221** or **221'**) on the vessel inner end wall-facing side (i.e., facing the fixed opposing surface **222** of vessel **20**); (column 3, lines 29-39; column 6, line 65 to column 7, line 5).

Rothert does not explicitly state that support members **110'**, **112'** are disk shape. However, the illustrations of elements **110'**, **112'** show the support members being substantially of a disk shape (i.e., as shown in side view in FIG. 10, elements **110'**, **112'** are flat plates; as shown in front view in FIG. 8, the elements are circular). In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select a disk shape for the support members **110'**, **112'** in the apparatus of Rothert, on the basis of suitability for the intended use, because changes in shape would merely involve routine skill in the art.

Rothert et al. also discloses the stirring rotor **26** being divided into a plurality of stirring blocks having structure based upon the viscosity of the liquid feed (i.e., by using disks **220** to **220s** with larger holes or lattice interstices at one end of the apparatus than at the other; or by arranging the spacing between disks **220** to **220s** closer to one another at one end of the apparatus than at the other; or by providing disks **220** to **220s** which are more strongly inclined at one end of the apparatus than at the other); (see column 2, lines 55-68; column 3, lines 40-52; column 4, lines 16-32; column 7, lines 35-63).

Rothert et al. discloses the longitudinal stringers **116** provided each between adjacent hollow disks **220** to **220s** “can be given appropriate profiles for performing a scooping function,” (column 4, lines 4-8), and illustrates an example of such profile in FIG. 4, wherein stringers **116** are configured as longitudinal stringers **117** provided with a U-shape cross section, for reinforcing the streak-flow of flowable material **23** on disks **220** to **220s** and for reinforcing the formation of veil or film formation at the inner periphery of the discs, in the manner of scoop elements **225** (column 6, lines 25-46; see FIG. 9). Rothert et al., however, is *silent* as to whether the longitudinal stringers **116/117** may comprise scraping plates each between adjacent hollow disks **220** to **220s**, for scraping the liquid feed attached to the inside wall of the vessel **20**.

Hohlbaum teaches a contactor (FIG. 1, 1A, 5-7) comprising a stirring rotor provided with a plurality of axially spaced, circular discs **13** in a longitudinal direction thereof, placed within a cylindrical vessel (i.e., cylindrical drum **12**), wherein the plurality of discs **13** are connected to each other by a plurality of “buckets **20**”, which are carried by and extend between each of the adjacent discs **13** at their peripheries. “Buckets **20**” function essentially like the “U-shaped longitudinal stringers **117**” of Rothert et al., by collecting the flowable material at the lower

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portion of the cylindrical vessel and distributing the material at the upper portion of the cylindrical vessel, upon rotation of the stirring rotor. Additionally, Hohlbaum teaches the provision of plough blades **27** to the stirring rotor, the blades **27** extending from and forming a continuation of two diametrically opposed buckets **20** (see FIG. 5, 6), or provided as separate plates from the buckets **20** (see FIG. 7), and functioning essentially as the instantly recited “scraping plates”. The plough blades **27** help avoid the formation of a stationary layer of solids in the annular passage **14** at the bottom of the drum **12**, which can impede the flow of slurry through the contactor (column 3, line 67 to column 4, line 17).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the scraping plates as taught by Hohlbaum to the stirring rotor in the apparatus of Rothert et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the plates help avoid the formation of a stationary layer of solids at the bottom of the cylindrical vessel, as taught above.

Response to Arguments

9. Applicant's arguments filed on July 8, 2005 have been fully considered but they are not persuasive. Beginning on page 4, last paragraph, of the response, Applicants argue,

“The contention by the Examiner... that the outer diameter of the another support member **112** is smaller than the outer diameter of the stirring rotor **26**, in Rothert, et al., is noted. However, it is respectfully submitted that the member **112** in Rothert, et al. is a stub shaft, not a support member as in the present claims. It is respectfully submitted that the screw-shaped stripper **221** as described in Rothert, et al. corresponds to the support member as in the present claims; however, the screw shaped stripper **221** in Rothert, et al. does not have a disk shape, contrary to the present claims which recite support members having a disc shape.”

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From the rejection, above, the Examiner asserts that the stub shaft correctly corresponds to the support member as claimed, and the screw shaped stripper correctly corresponds to the scraping vanes as claimed. As illustrated in FIG. 1 and 10, it is apparent that the stub shaft comprises two portions: an elongated shaft portion designated as element 112 in FIG. 1, and an end disk-shaped portion of larger diameter than the shaft portion 112, unlabeled in FIG. 1 but designated as element 112' in FIG. 10. Thus, the apparatus of Rothert, et al. structurally meets the claim amendment by comprising a support member 112' having a disk shape, and scraping vanes 221 or 221' on the support member 112'.

In addition, on page 6, first paragraph, Applicants argue,

“To emphasize, Rothert et al. discloses two stub-shafts. It is respectfully submitted that this disclosure of structure in Rothert et al. would neither taught nor have suggested, and in fact would have taught away from, the structure claimed... including support members, having a disc shape at both ends of the stirring rotor...”

The Examiner respectfully disagrees. Although the structures may comprise “stub-shafts”, the stub shafts as illustrated have a disc shape (see FIG. 1, 8 and 10, wherein the stub-shaft structures labeled as 110' and 112' are shown as flat, circular plates. The actual shaft 112 would, for instance, extend from structure 112').

On page 7, first paragraph, of the response, Applicants argue,

“... Hohlbaum is primarily concerned with a solid/liquid contactor including a drum with annular passages between the drum periphery and compartment forming discs. It is respectfully submitted that one of ordinary skill in the art concerned with in Rothert, et al. would not have looked to the teachings of Hohlbaum, directed to different technologies and different functions.”

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In response to applicant's argument that the contactor as taught by Hohlbaum is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Rothert, et al. and Hohlbaum are concerned with the particular problem of providing thorough mixing of a flowable material. In fact, Rothert, et al. (column 8, lines 62-66) discloses that,

“The term “mixing” as used herein is meant to include the mixing together of *two or more substances*. It is also meant to include the *homogenizing of a single substance* which is undergoing chemical changes such as in the production of polyester.”

Thus, the mixing as taught by both Hohlbaum and Rothert et al. represent analogous art, and one having ordinary skill in the art would have been properly motivated to apply the teachings of Hohlbaum to the apparatus of Rothert et al.

In addition, beginning on page 7, last paragraph, to page 8, Applicants argue,

“While the Examiner contends that both Rothert et al. and Hohlbaum “are concerned with the particular problems of providing thorough mixing of a flowable material, it is respectfully suggested that this is too broad of a characterization of the teachings of Hohlbaum, which is concerned with a slurry (that is, including a solid).”

The Examiner respectfully disagrees and maintains that the references of Rothert et al. and Hohlbaum represent analogous art. One of ordinary skill in the art would have considered a slurry to be a flowable material. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung
November 22, 2005



**HIEN TRAN
PRIMARY EXAMINER**